

Fig. 1

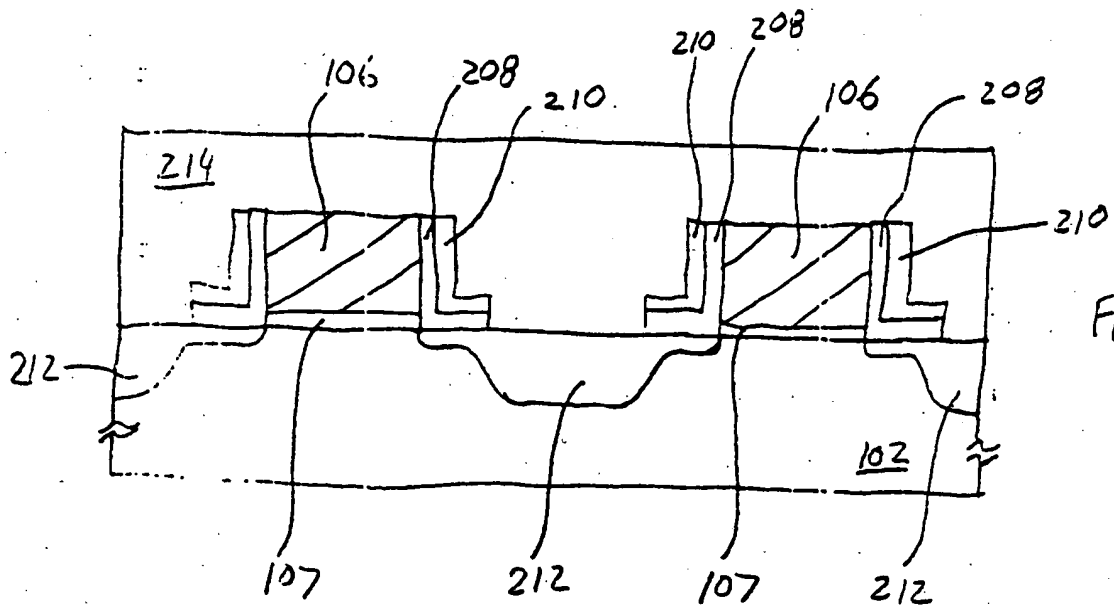


Fig. 2

09752798-061801

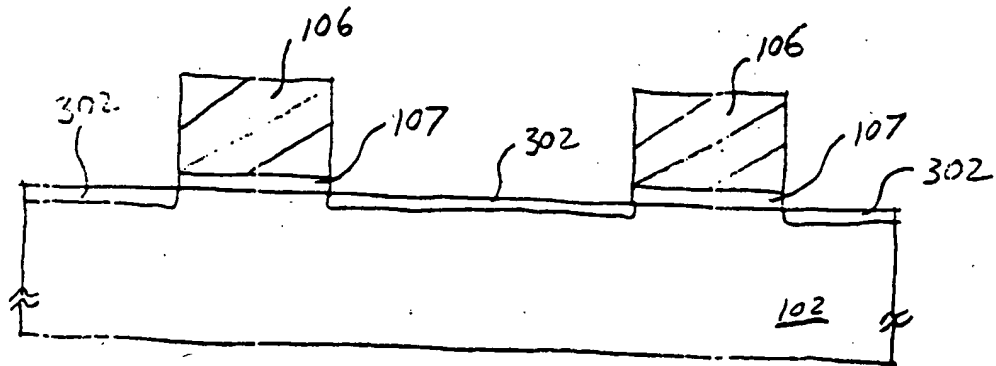


Fig. 3

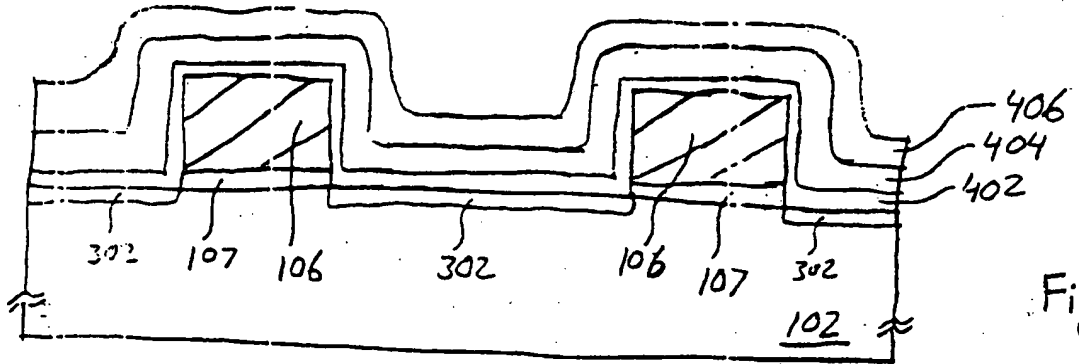


Fig. 4

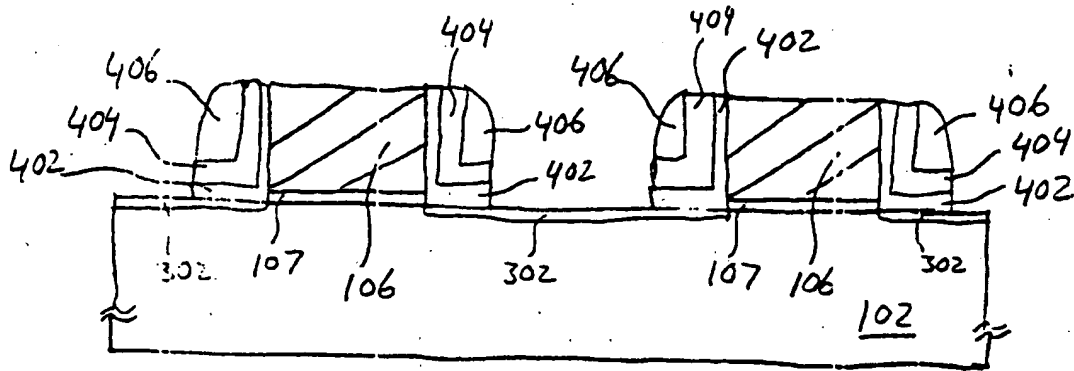


Fig. 5

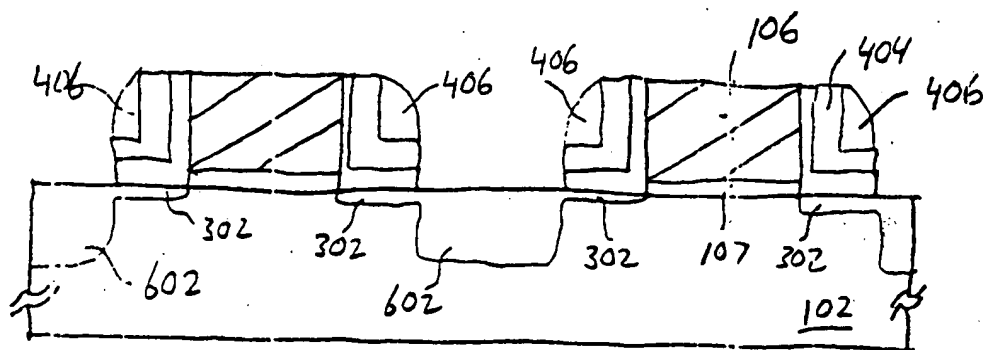


Fig. 6

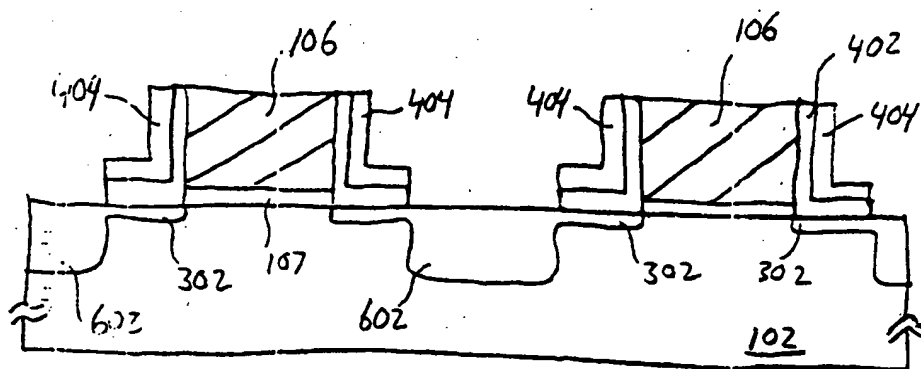


Fig. 7

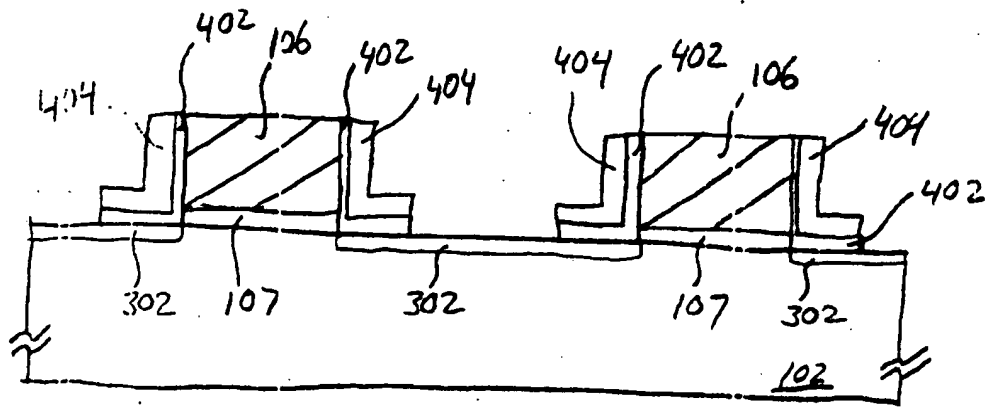


Fig. 8

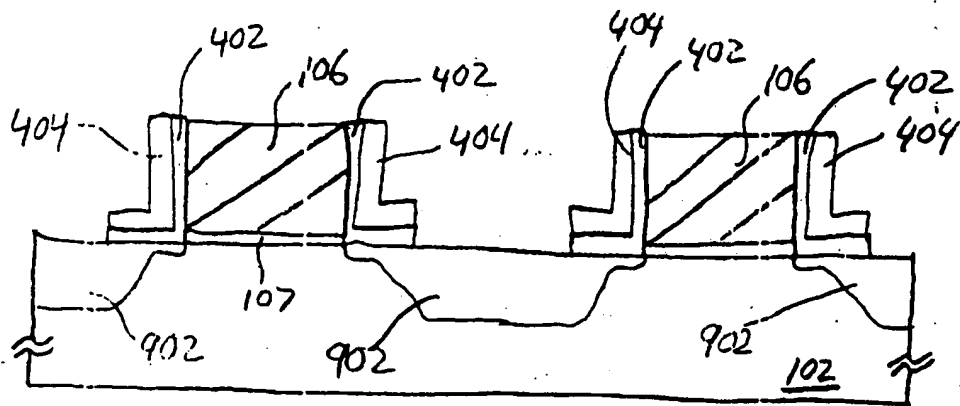


Fig. 9

1002

In a furnace, form a first silicon oxide layer over a substrate and patterned gate electrodes, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

1004

In a furnace, form a silicon nitride layer over a the first silicon oxide layer, from a combination of source gases including bis(tertiarybutylamino) silane and ammonia

1006

In a furnace, form a second silicon oxide layer over the silicon nitride layer, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

Fig. 10

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1102

In a furnace, form a first silicon oxide layer over a substrate and patterned gate electrodes, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

1104

In a furnace, form a silicon nitride layer over a the first silicon oxide layer, from a combination of source gases including bis(tertiarybutylamino) silane and ammonia

1106

In a furnace, form a second silicon oxide layer over a the silicon nitride layer, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

1108

Form sidewall spacers by anisotropically etching the first silicon oxide layer, the silicon nitride layer and the second silicon oxide layer

1110

Perform a deep source/drain implant

Fig. 11

1202

In a furnace, form a first silicon oxide layer over a substrate and patterned gate electrodes, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

1204

In a furnace, form a silicon nitride layer over a the first silicon oxide layer, from a combination of source gases including bis(tertiarybutylamino) silane and ammonia

1206

In a furnace, form a second silicon oxide layer over a the silicon nitride layer, from a combination of source gases including bis(tertiarybutylamino) silane and oxygen

1208

Form sidewall spacers by anisotropically etching the first silicon oxide layer, the silicon nitride layer and the second silicon oxide layer

1210

Remove the second silicon oxide layer from the sidewall spacers

1212

Perform a deep source/drain implant

Fig. 12